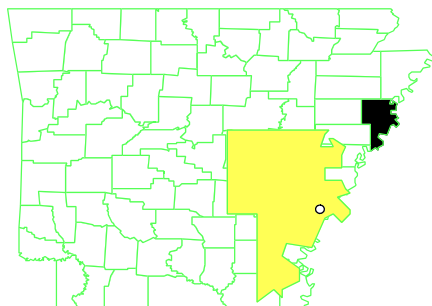


SOUTH 8TH ST. LANDFILL

ARKANSAS

EPA ID# ARD980496723

Site ID: 0600184



EPA REGION 6
CONGRESSIONAL DISTRICT 01

Crittenden County
West Memphis

Updated: September 1, 2004

Other Names:
West Memphis Landfill

Site Description

Location: West Memphis, Crittenden County, Arkansas, across the Mississippi River from Memphis, Tennessee.

Population: An estimated 30,400 people live within 4 miles of the site.

Setting: The site consists of a 16 acre landfill containing industrial and municipal waste and a former 2.5 acre oily sludge pit. The site is adjacent to the Mississippi River on the two year flood plain between the St. Francis Levee and the Mississippi River. The site is subjected to flooding from the Mississippi River between November and May. Surrounding land use consists of an operating RV park and barge terminal operations on the Mississippi River. Drinking water for the RV park is supplied by the City of West Memphis. The current river stage for the Mississippi River at Memphis, TN can be found at http://www.mvm.usace.army.mil/hydraulics/docs/current_river_stages.htm.

Hydrology: Within the alluvial aquifer beneath the site, the ground water table ranges from a few feet to 20 feet below the ground surface depending upon the stage of the Mississippi River. Ground water discharges to the adjacent Mississippi River. A clay unit of the Claiborne Group forms the base of the alluvial aquifer at a depth of 150 feet and isolates the alluvial aquifer from the Wilcox aquifer. The City of West Memphis obtains their drinking water supply from wells completed at a depth of 1300 feet in the Wilcox aquifer approximately 2 - 4 miles from the site.

Wastes and Volumes

Principal Pollutants: Prior to treatment, the waste in the oily sludge pit was highly corrosive with a pH of less than 2.0. The treated waste is no longer corrosive but still contains lead, PCBs, and carcinogenic poly-aromatic hydrocarbons (PAHs). Contaminants in the landfill areas of the site include carcinogenic PAHs and several pesticides. The ground water is no longer contaminated. Previous contamination consisted of lead, arsenic, and manganese.

Volume: A total of 19,376 cubic yards of oily sludge and 22,372 cubic yards of ancillary soil were neutralized and treated. The 16 acre landfill has a natural soil cover with a minimum thickness of 2 feet.

Site Map and Diagram

Two figures illustrating the site features are available on the EPA website.

Site Assessment and Ranking

NPL LISTING HISTORY

Site HRS Score: 50.27

Proposed Date: 2/07/92

Final Date: 10/14/92

The Remediation Process

Site History:

- Aerial photographs indicate that the site was used for the excavation of a series of borrow pits and the subsequent disposal of waste since 1959.
- EPA investigated the site between 1981 and 1988 prior to the placement of the site on the NPL in 1992.
- EPA issued a Unilateral Administrative Order (“UAO”) to the potentially responsible parties (“PRPs”) for the South 8th Street site on May 23, 1992. The UAO required the PRPs to construct a fence around the former disposal areas and to investigate the oily sludge pit. Construction of the fence was completed in July 1992. On August 3, 1992, the PRPs commenced the site investigation.
- EPA suspended the PRP activities on September 2, 1992, due to failure to comply with requirements of the UAO. EPA completed the RI/FS Report on June 30, 1993, addressing both the landfill and oily sludge pit at the South 8th Street site.
- EPA constructed a 1600 linear foot berm around the oily sludge pit to minimize the spread of contamination that could result from flooding of the Site. Construction of the berm was completed between October and November 1992, under the CERCLA time-critical removal authority
- EPA issued a Record of Decision (ROD) in September 1994 calling for excavation, treatment, and off-site disposal of the oily sludge pit wastes and a natural soil cover over the former landfill areas. The ROD split the site into a source control (landfill and pit) and ground water operable units. A decision on ground water was deferred pending collection of additional data.
- EPA signed an Administrative Order on Consent (AOC) on 3/02/96 with a PRP group to conduct the remedial design for the site. EPA encouraged the formation of a PRP group by supplying a third party mediator to act as a catalyst for group formation.
- EPA completed the ground water remedial investigation in November 1996 and the feasibility study in July 1997.
- EPA signed the ROD Amendment on July 22, 1998 for the selection of in-situ stabilization/solidification for the oily sludge pit and monitored natural attenuation with institutional controls for the ground water operable unit. Treatment of the oily sludge wastes were required to meet the more stringent performance standards for in-place management of the treated material and protection of the site ground water. The ROD Amendment also modified the scope of the natural soil cover to be installed on the landfill by requiring the installation of a 2-foot thick natural soil cover over part of Area

1 of the landfill and the treated oily sludge pit area in Area 2 of the landfill. The remedy included institutional controls prohibiting the digging or trenching on the property to prevent damage to the soil cover and exposure of the treated material.

- The Remedial Design for the amended source control remedy and the ground water remedy was completed by the PRP Group and approved by EPA on 8/26/98.
- The PRPs mobilized to the Site in June 1999 under the 1998 UAO to commence the remedial action. All remedial action construction was completed in August 2000. EPA and ADEQ conducted a final inspection on August 22, 2000.
- The Remedial Action Report prepared by the PRP Group was approved by EPA.
- Ground water sampling and any other operation and maintenance activities are performed utilizing funds received from the PRPs as part of the settlement under the Consent Decree entered by the U.S. District Judge in December 2000.
- EPA completed the ground water sampling activities at nine monitoring wells to evaluate the monitored natural attenuation remedy for the ground water operable unit. EPA collected ground water samples in January 2002 and monthly from April through November 2002. The monthly sampling effort evaluated influences on contaminant concentrations related to the seasonal rise and fall of the water table. The Site flooded between the May and June 2002 ground water sampling events. The September 2002 sampling was cancelled due to the low water table which prevented sample collection in the shallow wells.
- The ground water monitoring program demonstrated that the combination of source area treatment and natural attenuation processes were effective in achieving the cleanup goals for the ground water operable unit. The remedial goals for the ground water are: lead at 15 ppb; arsenic at 50 ppb; barium at 2000 ppb; beryllium at 4 ppb; and manganese at 4088 ppb. In addition, volatile organic compounds were infrequently detected at very low concentrations below their respective maximum contaminant levels.
- The ground water monitoring wells were plugged and abandoned in June 2003.
- The former property owner, William L. Johnson Co., has filed the property easement in accordance with the signed Consent Decree.
- EPA signed the Final RA Report for the Site on June 9, 2003 and the Final Close Out Report on September 25, 2003.

Health Considerations:

- The oily sludge pit, which was the principal threat waste at the site, has been treated and no longer poses a current health risk. Because the treated waste still contains the hazardous substances, the site is not available for unrestricted use. The landfill contents are covered with 2 feet of soil but still contains hazardous substances which prevents the site from unrestricted use.
- Ground water contaminant concentrations for arsenic, lead, and manganese are below the site remedial goals.

Other Environmental Risks:

- The site no longer poses an ecological risk following completion of the remedial action.
- The discharge of ground water contaminants into the Mississippi River did not adversely impact the water quality of the Mississippi River.

Record of Decision

Signed: September 1994
Amended: July 1998

- Community Involvement Plan: Developed 5/92
- Open Houses/Workshops: 1/92, 4/92, 2/93, 4/93, 8/93, 12/94, 3/95
- Three meetings were held with public officials during 1992 and 1993, and one in 6/97
- Original Proposed Plan - 7/93; Public Meeting 8/93
- ROD - Selected 09/94
- Community meeting to brief citizens on revised ROD as signed, 12/94
- Community meeting to brief citizens on a proposed change in the ROD remedy, 6/97, 8/97, 1/98
- Proposed Plan for Amended Remedy for Source Control Operable Unit and Preferred Remedy for Ground Water Operable Unit - 1/5/98 to 2/4/98; Public Meeting - 1/26/98
- Milestone Fact Sheets: 2/92, 4/92, 7/93, 6/97, 1/98, 8/98, 2/04, 6/04, 7/04
- Citizens on site mailing list: 150
- Site Repository: West Memphis Public Library

Technical Assistance Grant

- Availability Notice: 4/92
- Letters of Intent Received: None
- Final Application Received: N/A
- Grant Award: N/A
- Current Status: Available

Contacts

- **EPA Remedial Project Manager:** Vincent Malott, 214/665-8313
- **EPA Community Involvement:** Vincent Malott, 214/665-8313
- **EPA Attorney:** Anne Foster, 214/665-2169; Amy McGee, 214/665-8063
- **EPA State Coordinator:** Karen Bond, 214/665-6682, Mail Code 6SF-AP
- **EPA Prime Contractor:** NA
- **State Contact:** Masoud Arjmandi, 501/682-0852, ADEQ

Enforcement

- General Notice sent to 25 Potentially Responsible Parties (PRPs) - 2/07/92.
- Special Notice sent to 26 PRPs - 3/18/92.
- Unilateral Administrative Order (UAO) issued to PRPs (except for City of West Memphis) to construct fence around the former disposal areas and investigate the oily sludge pit - 5/23/92. PRPs began the pit investigation in August 1992. EPA took over the pit investigation in September 1992.
- 35 PRPs formed a group to sign an Administrative Order on Consent (AOC) with EPA on 3/2/96 to design the site remedy. The PRP Group has submitted the remedial design documents required under the AOC.
- Unilateral Administrative Order (UAO) issued on 11/18/98 to fifty-seven (57) PRPs to implement the selected remedy for the oily sludge pit in the source control operable unit.

EPA held a conference with the PRPs on 12/02/98 in Dallas, TX to discuss the UAO with the PRPs. The UAO was effective on 12/4/98. The PRPs notified EPA of their intent to comply with the UAO on 12/14/98.

- Consent Decree implementing the remedial action, including institutional controls, and payment of costs was entered by the U.S. District Judge on December 19, 2000. The Consent Decree was previously signed by EPA and the settling PRPs (generators and landowner).

Present Status and Issues

- Deletion of the Site from the Superfund National Priorities List (NPL) is effective on September 28, 2004.
- The EPA did not receive any public comments on the proposed site deletion during the public comment period that began on July 30, 2004, and closed on August 30, 2004. The direct final notice of deletion and the proposed notice of deletion from the NPL was published in the Federal Register on July 30, 2004. A public announcement appeared in the West Memphis and Memphis newspapers.
- The first Five-Year Review of the site-wide remedial action was signed on June 17, 2004. The report is available at the site repository and on the EPA website. The report documents that the completed remedy remains protective of human health and the environment.
- There are no scheduled operation and maintenance requirements for this Site other than periodic site inspections to ensure that the institutional controls remain protective of human health. The stabilized/solidified waste in the former oily sludge pit does not require any maintenance and was designed to remain in-situ based on the stringent treatment standards. The soil cover on the landfill and treated oily sludge pit area does not require mowing or other vegetation control since the vegetation helps to reduce potential erosion during flooding events. The protective fence around the Site has been removed with the exception of the area within the hardwood wetlands that separates the Site from the St. Francis levee. A security gate at the entrance to the Site from South 8th Street was left in place at the request of the property owner to control access to the Site.
- Institutional controls have been implemented at the site to prevent exposure to ground water and the treated waste and landfill contents. The Consent Decree (Section V.9.a, Section IX.24.b) lodged in the U.S. District Court for the Eastern District of Arkansas in November 1999 and entered in December 2000, specified a property easement, running with the land, that (i) grants a right of access for the purpose of conducting any activity related to the Consent Decree or any other activity related to implementing the ROD, including but not limited to, monitoring; and (ii) grants to the right to enforce the land/water use restrictions listed in the Consent Decree to the United States, the State of Arkansas and its representatives, the other settling defendants, and other appropriate grantees. The land/water use restrictions include: 1) the prohibition on the installation of water wells in the alluvial aquifer until the remedial goals for the ground water operable unit have been achieved; 2) the prohibition on the removal of vegetation from the landfill cover if such removal may result in the subsequent erosion or removal of the soil cover over the landfill or treated material; and 3) the prohibition on the excavation or trenching into the treated material, landfill contents, or the associated soil cover with some exceptions. The property easement was executed on March 6, 2001 by the William L. Johnson Co. The prohibition on further excavation into the treated material, landfill contents, or soil cover effectively prohibits further well installation at the site due to the site-wide presence of the landfill and the treated oily sludge pit.

Benefits

- Treatment of the oily sludge pit has removed the potential risk to human health from accidental exposure, removed the potential ecological risk due to exposure to animal life from exposure, and reduced the ongoing leaching of contaminants from the sludge pit to the ground water which ultimately discharges into the adjacent Mississippi River.
- The 16 acre landfill will be available for site reuse consistent with the property restrictions or provide a natural habitat for use by mammals and birds.